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SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402-0938			DAY, HERNG DER	
			ART UNIT	PAPER NUMBER
			2128	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/688,006

Applicant(s)

SISLEY, ELIZABETH

Examiner

Herng-der Day

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to Applicant's Amendment and Response ("Amendment") to Office Action dated June 3, 2004, mailed December 3, 2004, and received by PTO December 16, 2004.

1-1. Claim 1 has been amended. Claims 4-16 have been added. Claims 1-16 are pending.

1-2. Claims 1-16 have been examined and rejected.

Drawings

2. The corrected drawing sheet for FIG. 1 received December 16, 2004 is acceptable.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description:

(a) An example method 200, as described in line 7 of page 13.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Specification

4. The disclosure is objected to because of the following informalities:

Appropriate correction is required.

- 4-1. It appears that "Figure 6", as described in line 16 of page 39, should be "Figure 5".
- 4-2. As described in lines 8-9 of page 40, "In Table 13, these thresholds (shown as double lines) are CT = 7, DT = 5, and PT = 3". However, no double lines can be found in Table 13.
- 4-3. It appears that "90°/0", as described in line 1 of page 43, should be "90%".
- 4-4. It appears that "71'" and "900", as described in Table 13 of page 43, should be "71%" and "90%" respectively.
- 4-5. It appears that "A₁-A₄ n FIG. 4", as described in line 12 of page 2 in Applicant's Amendment received December 16, 2004, should be "A₁-A₄ in FIG. 4".

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.
- 6-1. The amended claim 1 recites the limitation, "interleaving the preallocated data and control couplings" in 10 of the claim, which does not appear to have support in the original

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disclosure. For example, as shown in the block 214 of FIG. 2 and described in the specification at page 30, lines 10-11, the method interleaves the data and code partitioning.

6-2. The newly added claim 9 recites the limitation, “interleaving the preallocated data and control couplings” in 11 of the claim, which does not appear to have support in the original disclosure. For example, as shown in the block 214 of FIG. 2 and described in the specification at page 30, lines 10-11, the method interleaves the data and code partitioning.

6-3. The newly added claims 5-7 and 13-15 recite the limitation, “the coupling strength is determined using a value selected from the group comprising: ...” in each claim, which does not appear to have support in the original disclosure. For example, as described in the specification at pages 26-29, the coupling strength is determined using all the values selected from each listed element of the group.

6-4. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

7. Claims 4-7 and 12-15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7-1. Claims 4 and 12 recite the limitation “determining a coupling strength” and claims 5-7 and 13-15 recite the limitation “the coupling strength is determined”. However, how to determine a coupling strength is unclear for one skilled in the art based on the disclosure. For example, as described in Table 6 at page 21, a timing strength will have maximum (=10) strength if “Time > minimum” and have low (=1) strength if “Time < maximum”. Therefore, when

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“minimum < Time < maximum”, the timing strength will be both maximum (=10) strength and low (=1) strength. In other words, without undue experimentation, it is unclear for one skilled in the art how to determine a timing strength and then determine a coupling strength.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9-1. Claim 1 recites the limitation “the system” in line 3 of the claim. It is unclear “the system” is referred to “a distributed system” in line 2 of the claim or “a target system” in line 3 of the claim. Please also clarify whether the target system is a distributed system.

9-2. Claim 9 recites the limitation “the system” in line 4 of the claim. It is unclear “the system” is referred to “a distributed system” in lines 2-3 of the claim or “a target system” in line 4 of the claim. Please also clarify whether the target system is a distributed system.

9-3. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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11. Claims 1-3 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Gomaa, "Structuring and Configuring Distributed Applications", International Workshop on Configurable Distributed Systems, March 1992, pages 18-32.

11-1. Regarding claim 1, Gomaa discloses a computerized method for determining an allocation of software and data components in a distributed system, the method comprising:

modeling a target system, the system having a plurality of computing resources (an individual target system is created, page 19, paragraph 1);

determining a set of couplings in the target system, said couplings including couplings selected from the group comprising: control couplings, data couplings and peripheral couplings (Loosely coupled message communication and Tightly coupled message/reply, page 21, section 3.3);

prepartitioning the set of couplings (Related objects are grouped into subsystems, page 18, paragraph 5);

preallocating each coupling in the set of couplings to one of the plurality of computing resources (allocate the subsystems to distributed nodes, page 22, section 5.2);

interleaving the preallocated data and control couplings (An aggregate object refers to a group of related objects that work together in a co-ordinated fashion, page 20, the last second paragraph);

defining a set of components according to the interleaved and preallocated couplings, the components having a data and a code segment (Instances of the target system components are generated, page 21, the last paragraph); and

determining a modularity of the set of components (defines how subsystems communicate with one another, page 22, paragraph 2).

11-2. Regarding claim 2, Gomaa further discloses comprising:

determining a computer hardware resource based on the determination of the modularity (The subsystem instances, which are logical nodes, are mapped to physical nodes, page 22, paragraph 3); and

interleaving the data and the code segment of each of the components (The aggregate object is composed of these simple objects, page 20, the last second paragraph).

11-3. Regarding claim 3, Gomaa further discloses comprising:

assigning each component of the set of components to a computer hardware resource based on the determination of the modularity (The subsystem instances, which are logical nodes, are mapped to physical nodes, page 22, paragraph 3); and

interleaving the data and the code segment of each of the components (The aggregate object is composed of these simple objects, page 20, the last second paragraph).

11-4. Regarding claims 9-11, these computer readable medium claims include same method limitations as in claims 1-3 and are anticipated using the same analysis of claims 1-3.

Allowable Subject Matter

12. Dependent claims 4-8 and 12-16 are not taught by the prior art, and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcome the above rejections under 35 U.S.C. 112, first paragraph and second paragraph.

Applicants' Arguments

13. Applicant argues the following:

13-1. §112 Rejection of the Claims

(1) "Applicant has amended claim 1 correct the antecedent basis issue" (page 8, paragraph 5, Amendment).

13-2. §102 Rejection of the Claims

(2) "Gomaa does not teach a computerized method. Gomaa states in section 5.1 on page 21 'During this phase, decisions have to be made. . . During Target System Configuration, the following activities need to be performed by the target system engineer:' (emphasis added).

Thus Gomaa does not teach a computerized algorithmic method having the same level of detail as shown in Applicant's claims, rather Gomaa provides generalized advice as to factors a system engineer might use to configure a system" (page 9, paragraph 2, Amendment).

(3) "neither the cited section nor Gomaa in general use the term 'interleaving' or its equivalents. Applicant can find no teaching or suggestion of interleaving preallocated data and control couplings" (page 9, last paragraph, Amendment).

(4) "Additionally, claims 2 and 3 each recite interleaving code and data. As noted above, Gomaa does not teach or suggest such interleaving" (page 10, paragraph 3, Amendment).

13-3. New Claims 4-16

(5) "Applicant has added new claims 4-16 in this amendment. Support for new claims 4-16 may be found throughout the specification, and in particular on pages 23-29 of the

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specification. Applicant believes that no new matter has been introduced in the new claims” (page 10, paragraph 4, Amendment).

Response to Arguments

14. Applicant’s arguments have been fully considered.

14-1. Response to Applicant’s argument (1). The amendment of claim 1 does not appear to have support in the original disclosure as detailed in section 6-1 above.

14-2. Applicant’s argument (2) is not persuasive. As described at page 19, first paragraph, Gomaa discloses, “Given a domain model of an application domain, an individual target system (one of the members of the family) is created by tailoring the domain model given the requirements of the individual system”. In other words, even for a computerized method, someone, for example, a target system engineer, needs to identify the requirements, hopefully after considered all the related factors, to have the computer implement the method.

14-3. Applicant’s arguments (3) and (4) are not persuasive. First, the amended “interleaving” limitation in claim 1 does not appear to have support in the original disclosure as detailed in section 6-1 above. Second, the limitation of “interleaving the data and the code segment of each of the components” as recited in claims 2 and 3 does not appear to have real “interleaving” effect because the components have only a data and a code segment as recited in claim 1. Therefore, even not explicitly using “interleaving”, Gomaa’s disclosure does meet the claimed limitation of “interleaving”.

14-4. Response to Applicant’s argument (5). The newly added claims 5-7 and 13-15 does not appear to have support in the original disclosure as detailed in section 6-3 above.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Reference to Zalewski et al., U.S. Patent 6,542,926 B2 issued April 1, 2003, and filed June 10, 1998, is cited as disclosing software partitioned multiprocessor system with flexible resource sharing levels.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30. Any inquiry of a general nature or relating

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to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jean R. Homere can be reached on (571) 272-3780. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Herng-der Day H.D.
April 28, 2005

Thai Phan
Patent Examiner
AU: 2128
04/28/05